Anand® MEDICAIDS
PRIVATE LIMITED

Instruction Cum User Manual For **INSTAD**

CE
2195

Dear Customer,

Congratulations on your purchase of this versatile and need oriented suction unit. It will serve you well for years, if properly looked after. The medical professions have long felt the need for a light weight, easy-to-move, safe, dependable and easy-to-regulate suction unit. INSTAD fills this healthcare need to a degree unmatched by any other unit. It is designed for use in hospitals, nursing homes, doctor's offices, paediatric care, ICU and home care. Non corrosive and shockproof enclosure is pressure moulded in engineering plastic ABS giving smooth and easy-to-clean surface.

ASSEMBLY

The pump (based on piston system), batteries and PC card are housed in the enclosure. The panel has a vacuum gauge, release valve (for vacuum adjustment), 'push to on' 'push to off' switch, filter upon a motor-shut sensor fitted safety jar and four neon lights indicating;

1) External power (mains AC on)
2) Internal battery
3) Vehicle battery
3) Internal battery charging level.

The first is for AC mains, second for internal battery pack, third for vehicle battery and the last shows battery charging level. The patient tube is to be connected to the other nozzle on the lid. Vehicle charging cord is to be connected on socket (with threading) provided on the side.

Antibacterial Filter (element replaceable) is slipped into the safety jar on top and the other end is connected to the slot on the jar lid. The second angular nozzle tube goes to the patient. The release valve for adjusting the negative pressure and the vacuum gauge are on the panel. An on/off switch cum pilot lamp, fuse and the removable main lead connector are on the side.

TECHNICAL

Housing: Engineering moulded ABS plastic cabinet with built-in handle and jar hangers
Capacity: 0-575 mm Hg ±10 regulable at 14 ltrs/min.
Pump type: Oil free piston pump.
Jar: 1 ltr. collection jar (Polycarbonate) with mechanical overflow cut-off system.
Tubing: 8 mm ID x 2 mtr (Silicon)
Vacuum Gauge: Bourden type 5 cms. 0-760mm Hg calibration.
Filter: Bacterial filter
Power: 110 to 220 V, AC and in-built maintenance-free 12 VDC 2.2 Ah battery, or ambulance/car socket (cable provided).
Dimension & Weight: 33 x 14 x 29 cms. 7 Kg.
Battery Backup: 120 minutes on full charge.

VACUUM AT ALTITUDES

The specified maximum vacuum refers to sea level.According to local conditions, and barometric pressure, slight deviations in vacuum reading may be noted.As a reference, the table below shows several factors, by which the indicated maximum vacuum value must be multiplied, according to the altitude of location where the measurement is carried out.

Location/Maximum Vacuum

Location	Sea level	1000m	2000m	4000m
Factor	1.00	0.88	0.78	0.60

GUIDELINES FOR USE

Pust-in-connector

Before the unit is put on please see that:
1. Two hexa bolts (used as holdfast in transportation) must be removed by rotating anticlockwise with the aid of a simple hand tool.
2. Jar be checked for any crack, tubing and lid be tightly placed on the jar. The angular connector must be inserted as far as the stop. While unplugging, twist and pull.
3. 'O'rings on the push-in connector and safety jar are intact.
4. Adjust vacuum before use. Fully tightened clockwise knob means full vacuum.

JAR / CLEANING AND DISINFECTING: Polycarbonate jar (PC) is superior to glass. 3/4th filling is recommended. After each use, jar, lid, over flow cut off valve, catheters, etc. should be cleaned thoroughly. When cleaning is necessary after infective fluid has been evacuated, the jar, lid, safety jar filter housing, tube, cut off valve can be sterilized by autoclaving upto 120° C for 20 minutes. Alkaline cleaning agents and disinfectants based on phenyel may not be used.
Adherence to hospital directives on hygiene is of prime importance. The instructions provided by the suppliers of cleaning agents as well as by the manufactures of sterilization/disinfection units must also be followed, where application, temperature, process duration and airing, etc. are concerned.

1 Ltr PC Jar

BACTERIAL FILTER: The replaceable filter element filters evacuated air before it enters the pump, thereby infecting the environment. It must be changed on normal days but immediately after vapours have entered or after infective suction has been done.

Bacterial Filter

PUMP

The unit is fitted with Piston type oil-free pump, provides reduced maintenance cost.

a) Open the unit with the aid of an allen key provided and disconnect the tube from the inlet point on the pump housing.

b) Take out the motorized pump fitted on (and together with) the platform.

c) The fly valves sheet is placed in the top the four screws of which can be opened-one for vacuum and the other for outlet. The piston is fitted below the top and over the eccentrically rotated came. Just wipe clean these parts and set the unit again.

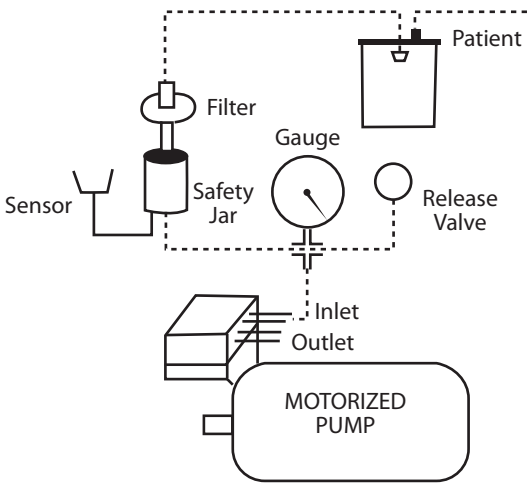
d) There are two openings (small and U type large) in both the top portions. While fitting see that large U of the one face towards the small round of the other and small of the first face the large of the screws can be put back and tightened in their positions.

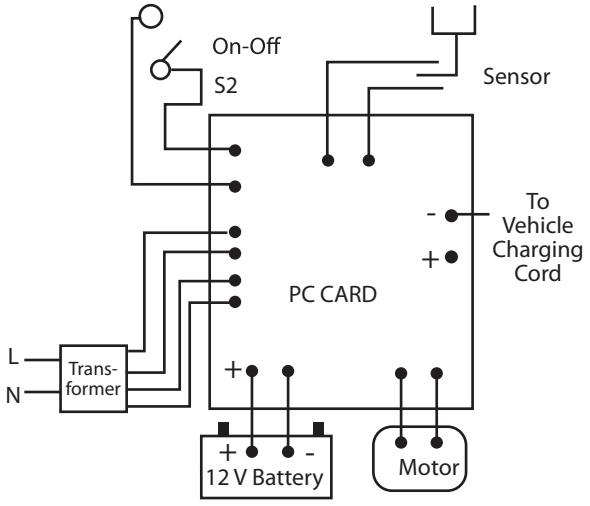
e) Please run the unit and see its satisfactory functioning before housing is screwed up.

Unlike the rotary design, **NO LUBRICATION IS REQUIRED IN THIS PUMP.** The unit has not to be tampered with by any mechanic other than our factory engineer, or the person authorized.

BATTERY REPLACEMENT

Open the back plate of the unit, remove negative and positive connections on the battery. Remove the battery from the hook and install new battery. Remember to charge the new battery for 8-10 hours for optimum performance.





TROUBLE SHOOTING:

Problem	**Possible source of trouble**	**Check/Action to be taken**
Motor does Not Run	Power Supply	Voltage, power socket
	Main switch	Set at "ON"
	Electrical cord	Plug type, plug connections, damaged cord
	Check if the safety jar is activated. Open the safety jar, clean & dry the jar and replace the cap for re-use	
Inadequate Suction Performance	Leak within the pump or in the external suction circuit	Isolate the source of trouble by carrying out the checks outlined.
	External cause: Push-in connector O-rings/Lid gasket	Condition
	Safety jar O-rings	Condition
	Push-in and angular connectors	No Leaks at tube ends. Push in as far as stop.
	Release Valve	The Knob should be tightly placed
	Tubing	Cracks, brittle areas
	Lids	Airtight fit jars and Safety jar
	Jars	Condition, Possible cracked edges,hairline cracks
	Bacteria filter housing (on Safety jar top)	Condition and absence of leaks
	Filter paper	Condition, position of housing
	BATTERY Inadiquate battery back-up	Charge the unit for 4-6 hours or replace battery
Vacuum gauge indicates a vacuum Pump does not suck, however	Blockage or kink in tubing within the pump or in the external suction circuit	Isolate source of trouble as follows: Remove the safety jar, leave the suction connection open. If the vacuum gauge now indicates zero vacuum, the cause is external
	External cause: Bacteria filter, safety jar, overflow valve in the lid, (float valve) push-in connectors, tubing etc.	Investigate the whole external suction circuit for blockage (s), float valve sticking, kinked tubing and rectify. If the vacuum gauge still indicates a vacuum, the cause is internal

TERMS OF WARRANTY

Anand Medicaids Private Limited warranty the high quality and workmanship of each Anand's HI-VAC for a period of one year subsequent to the date of delivery by the company. During this period, faulty material will be replaced free of charge. This warranty does not extend to components that are subject to wear and tear in the course of normal operation or due to improper treatment/maintenance as per instructions.

Further conditions in accordance with international standard IEC 601.1 item 6.8.2b.

The manufacturer is only responsible for effects on the safety, the reliability and the performance of the appliance if

• Installation, additions, adjustments, modifications or repairs are carried out by personnel authorized by the manufacturer

• The electrical installations within the room concerned satisfy the requirements laid down by IEC.

• The appliance is used in full accordance with the instruction manual which is solely a guide and no substitute for professional training. The safe and effective use of this product largely depends on the skill of the operator. We are not liable for any damages due to mishandling or improper and unauthorised use.

• The company reserve the right to change technical specifications, designations and catalogue numbers without prior notice.

Note

Ensure that your electrical wirings are well earthed with 1 line and 1 neutral phase and your voltage is between 220V 240V. 50 Hz.

Ensure that the suction unit should not be lifted above human body level.

Dispose of used product/packaging in safe manner so as not to harm stray cattle, children and environment.

WARRANTY CARD

Model No. ----------

SN ----------

Date of Purchase: ----------

Dealer Name: ----------

Stamp :

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EC REP

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